

REMARKS

Claims 11 through 17 are pending in the application, with Claim 11 having been amended, and with Claims 1-10 and 18-27 having been cancelled. Claim 11 is the sole independent claim herein. No new matter has been added. Reconsideration and further examination are respectfully requested.

Claim Rejections – 35 USC § 102(b)

Claims 11-14 and 16 are rejected as being anticipated by Takahashi et al. U.S. Patent No. 6,106,923 (“Takahashi”).¹

Before discussing the specific claim amendments that have now been made to overcome the pending rejection, applicants will first offer some general remarks comparing the subject matter of the present application with that of the Takahashi reference. As the Examiner has noted, both the present application and the reference call for the formation of a pattern of slots in a metal layer that is between two dielectric layers. However, the objectives of these similar structures are quite different. In Takahashi, the slots are provided (as one of a number of different shapes of opening) to allow the escape (venting) of gasses that would otherwise be trapped by the metal layer.² By contrast, in the present application, the slots are employed in place of prior art circular holes that conventionally allow the dielectric layers on either side of the metal layer to adhere to each other. Slots are used instead of conventional adhesion holes to more readily allow for arrangement of signal traces in an overlying, second metal layer such that the signal traces do not pass over the locus of the apertures in the slotted metal layer. If the signal traces did pass over the adhesion apertures crosstalk or timing skew might result.³ Moreover, the present application teaches that the orientation of the slots in the pattern of adhesion slots may be adjusted so that the signal traces in the overlying metal layer do not pass over any of the slots. Such an adjustment of slot orientation to avoid overlying signal trace location is not taught or suggested by the Takahashi reference.

¹ Claims 15 and 17 are similarly rejected as unpatentable over Takahashi.

² See, e.g., the reference’s Abstract and column 2, lines 49-52.

³ Page 2 of the present application, at lines 3-20; page 5, lines 24-26.

Claim 11 is the sole remaining independent claim. As now presented, claim 11 is directed to a “method” which includes “forming a first metal layer on a first dielectric layer” and “forming a second dielectric layer on the first metal layer”. The method of claim 11 further includes “forming a second metal layer on the second dielectric layer” and “patterning the second metal layer such that signal traces are formed in the second metal layer”. Still further, the method includes “patterning the first metal layer as a substantially continuous sheet having slots formed therein in a substantially rectangular pattern to allow the first and second dielectric layers to adhere to each other by way of the slots” and “adjusting an orientation of at least some of the slots in the substantially rectangular pattern such that none of the signal traces passes over any of the slots.

The new limitations in this claim, as now amended, are:

forming a second metal layer on the second dielectric layer--supported at page 3, lines 25-26 of the specification;

patterning the second metal layer such that signal traces are formed in the second metal layer--supported at page 3, line 26 to page 4, line 2;

the slots in the first metal layer are in a substantially rectangular pattern--supported at page 4, lines 24-27; and

adjusting an orientation of at least some of the slots in the substantially rectangular pattern such that none of the signal traces passes over any of the slots--supported at page 5, line 24 to page 6, line 4, and especially page 5, line 28 to page 6, line 2; see also FIGS. 3 and 4; and page 7, lines 2-7.

The latter limitation is believed to render claim 11 patentable over the Takahashi reference. As noted above, the reference does not teach or suggest that the orientation of slots in a metal layer be adjusted to avoid having signal traces in an overlying metal layer pass over the slots. It is therefore respectfully requested that the rejection of claim 11 be reconsidered and withdrawn.

Claims 12-17 are dependent on claim 11 and are submitted as patentable on the same basis as claim 11.

CONCLUSION

Accordingly, Applicants respectfully request allowance of the pending claims. If any issues remain, or if the Examiner has any further suggestions for expediting allowance of the present application, the Examiner is kindly invited to contact the undersigned via telephone at (203) 972-3460.

Respectfully submitted,



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